## APPENDIX A

## SUMMARY OF SUBSTANTIVE ISSUES COVERED IN COMMENT LETTERS

On May 27, 1977, ERDA issued a Federal Register notice (42 FR 27281) announcing the publication of *Alternatives for Long-Term Management of Defense High-Level Radioactive Waste — Savannah River Plant* (ERDA 77-42, also known as the Defense Waste Document, or DWD). Announcement was also made at that time of the intent to issue a programmatic EIS, and the public was invited to use the DWD as reference material to comment upon areas that should be covered in the programmatic EIS. In addition, a draft version of this programmatic EIS was given wide distribution and comments were solicited. Thirty comment letters were received on the DWD, and seventeen were received on the draft of this EIS. The substantive issues that were covered in these letters are summarized below, and are discussed at appropriate points in the main text. Major comments and specific DOE responses are given in Appendix B.

Several respondents indicated they felt that disposal of the waste in a bedrock cavern under the SRP site is an unacceptable alternative because the overlying Tuscaloosa aquifer might become contaminated. Others indicated a preference for the SRP bedrock disposal concept because of the large cost savings and lack of need for transporting the waste long distances inherent in that alternative. Bedrock disposal is retained among the alternatives discussed in this programmatic EIS so that the full range of cost and risk differences among the feasible alternatives may be presented. To eliminate the bedrock disposal concept from full public review at an early stage of decision-making would be to prematurely foreclose an option with important economic and sociological characteristics. It is noted, however, that no research and development work is under way or proposed related to an SRP bedrock cavern.

Suggestions have been made that the alternatives chosen for treatment and disposal of the defense wastes at the Savannah River, Hanford, and Idaho sites be similar, with as little duplication of research and development effort as possible, and with as much application toward commercially generated waste as possible. There is close interaction among the DOE sites, with research and development efforts differing as required by the different forms of waste at each site. If a decision is later made to reprocess commercially generated fuel, some of the work done for defense waste may be applicable to treating commercial waste. There are, however, major differences between the waste types because

commercial waste bears a greater radionuclide and heat load. The difference stems from higher burnup of the commercial fuels and a more concentrated waste stream in the commercial plant designs. Also, waste at SRP is generated in an alkaline form by the addition of caustic while commercial reprocessing plants would produce acid waste.

Interest was shown in the analysis of vulnerability to sabotage or terrorism, and in the estimates of probability of successful sabotage. There is no firm basis for estimating the probability of sabotage of waste processing or disposal facilities, and the probabilities used to complete the risk analysis are somewhat arbitrary. However, the consequences of credible sabotage events do have a sound physical basis. These consequences were found to be very small compared to levels that would possibly be attractive to terrorists, and indicate that the probability of sabotage being attempted is very low. Possible sabotage should not weigh heavily in the decision process of choosing an alternative.

Several respondents indicated they felt that cost and cost differences should not be important considerations in choosing among the alternatives, while others thought cost is an important decision factor. Cost estimates are given in this EIS for perspective, but without judgment as to how they should be weighed by decisionmakers.

A period of 300 years was used to calculate time-integrated population exposure risks, and some comments reflected a concern that the time used should be from tens to hundreds of thousands of years. The basis for using 300 years is that enough radioactive decay has occurred by then that exposure to individuals if any of the unlikely events did occur would, in most cases, be small fractions of the natural background radiation individuals always receive. Longer time integration therefore has little meaning for decisionmaking among alternatives or for assessment of environmental impacts that may result from implementation of the alternative presently in the research and development stage. Integrated exposure risks for a period of 10,000 years have been added, however, to illustrate the fact that most of the risk occurs during the early years.

Opinions were given that the risk analyses should use fault-tree methods or some similar system of very detailed and systematic investigation. Such an approach is desirable once an alternative

is chosen and engineering designs have been made. Until then, all the important components of the system and their failure probabilities and interactions cannot be defined. Instead, overall events that might have significant offsite exposure consequences were identified using 25 years of operating experience from similar facilities and technical judgment. A sound physical basis was established for upper bounds of the consequences from these events. Many of the overall probabilities of occurrence also have a sound basis from experience, but some are rough estimates (particularly the probability of successful sabotage). This method gives confidence that upper bounds of risks from the important consequences have been discovered, and should be adequate for decision-making among the alternatives. The fact that the resulting maximum risks for any of the alternatives are small also indicates that risk differences among alternatives will not be major decision factors.

A variety of comments and suggestions were received regarding placing a dollar value on population exposure risks as an aid to the decision-making process. The information in both the DWD and in this programmatic EIS is presented in such a way that each decision-maker or other individual can apply his own monetary valuation, or none at all, to the risks.